

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Davis et al.

Serial No.: 10/048,138

Filed: January 22, 2002

EXTREME ULTRAVIOLET SOFT X-RAY
PROJECTION LITHOGRAPHIC METHOD
SYSTEM AND
LITHOGRAPHIC ELEMENTSAssistant Commissioner for Patents
Washington, DC 20231

Group Art Unit: TBA

Examiner: TBA

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR § 1.97 - 1.98

Sir:

The Examiner's attention is hereby directed to the following reference(s) listed on the attached Form PTO-1449 for consideration in connection with the examination of the above-identified patent application. One copy of the reference(s) is enclosed.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the enclosed documents constitute "prior art." If it should be determined that any of the submitted documents do not constitute "prior art" under United States law, applicant(s) reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant(s) further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the enclosed references, should one or more of the references be applied against the claims of the present application.

Please charge any fee due under the filing of this Information Disclosure Statement to Corning Incorporated Deposit Account No. 03-3325.

Respectfully submitted,

Edward F. Murphy
Attorney for Assignee
Reg. No. 38,251
Corning Incorporated
SP-TI-03
Corning, NY 14831
(607) 974-3716

Date: 5/29/2002

Date of Deposit: May 29, 2002
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date indicated above with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, DC 20231

Signature

LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION
DISCLOSURE STATEMENT

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APPLICANT Davis et al.

FILING DATE 1/22/02

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REFERENCE DESIGNATION

PATENT & TRADEMARK OFFICE

Examiner Initial	Document Number	Date	Name	Class	Sub-Class	Filing Date if Approp.
AA	09/943,466	8/30/01	Ackerman et al.			
AB	09/943,445	8/30/01	Bowden et al.			
AC	09/943,252	8/30/01	Best et al.			
AD	09/676,721	9/28/00	Yu			
AE	09/506,162	2/17/00	Hrdina et al.			
AF	2001/0028462	10/11/01	Ichihara et al.			
AG	2,272,342	2/10/42	Hyde			
AH	2,326,059	8/3/43	Nordberg			
AI	3,713,728	1/30/73	Austin et al.			
AJ	3,790,654	2/5/74	Bagley			
AK	4,002,512	1/11/77	Lim			
AL	4,184,078	1/15/80	Nagel et al.			
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AN	4,501,602	2/26/85	Miller et al.			
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AS	5,076,700	12/31/91	DeCaprio			
AT	5,146,518	9/8/92	Mak et al.			
AU	5,152,819	10/6/92	Blackwell et al.			
AV	5,154,744	10/13/92	Blackwell et al.			

FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Sub-Class	Translation Yes	No
AW	WO 00/48952 ✓	8/24/00	PCT				
AX	WO 00/03400 ✓	1/20/00	PCT				
AY	WO 01/75522 ✓	10/11/01	PCT				
AZ	WO 01/08163 ✓	2/1/01	PCT				
A1	WO 01/07967 ✓	2/1/01	PCT				
A2	1 106 582A2 ✓	6/13/01	EPC				
A3	0 349 925A1 ✓	1/10/90	EPC				

OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

A4 Rapid Prototyping (11/5/01), <http://mtiac.iitri.org/pubs/rp/rp1.htm>A5 3D Systems: Leftnav (11/5/01);
<http://www.3dsystems.com/products/slssystems/vanguard/index.asp?promo=100>A6 ULE: Zero Expansion Glass (10/31/01);
http://www.corning.com/semiconductormaterials/products_services/ule.asp

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LIST OF PATENTS AND PUBLICATIONS
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APPLICANT Davis et al.

FILING DATE 1/22/02

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REFERENCE DESIGNATION

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Examiner Initial		Document Number	Date	Name	Class	Sub-Class	Filing Date if Approp.
	A7	5,220,590	6/15/93	Bruning et al.			
	A8	5,315,629	5/24/94	Jewell et al.			
	A9	5,332,702	7/26/94	Sempolinski et al.			
	A10	5,353,322	10/4/94	Bruning et al.			
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	A13	5,553,110	9/3/96	Sentoku et al.			
	A14	5,565,030	10/15/96	Kado et al.			
	A15	5,605,490	2/25/97	Laffey et al.			
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	A22	6,176,588	1/23/01	Davis, Jr. et al.			
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	A24	6,199,991	3/13/01	Braat			
	A25	6,280,294	8/28/01	Miyamoto			
	A26	6,299,318	10/9/01	Braat			
	A27	6,312,317	11/6/01	Oguma			

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A28		Properties of Corning's Glass and Glass Ceramic Families, pp. 1-23, 1979
A29		P. C. Shultz et al., <i>Ultra-Low-Expansion Glasses and Their Structure in the SiO₂ and TiO₂ System</i> , presented to the Third International Conference on the Physics of Non-crystalline Solids, Sheffield University, September 1970.
A30	'	"Industrial Applications of Silica," Beall, G. H., <i>Reviews in Mineralogy</i> , Vol. 29, pages 469-505.
A31		<i>HPFS Flyers</i> : Standard Grade, ArF Grade and KrF Grade, May 1999
A32	'	"Ultra-low-expansion glasses and their structure in the SiO ₂ -TiO ₂ System," Schultz et al., <i>Amorphous Materials</i> , Sept. 1970, pages 453-461.
A33	'	"Extreme Ultraviolet Lithography," Gwyn et al., <i>EUV LLC</i> , Nov. 1999, pages 97-141.
A34	,	Tanya E. Jewell, Four-Mirror Ring-Field System for EUV Projection Lithography, 1994, pages 98-102.
A35	/	High Purity Quartz Glass Products, 5/17/99, http://www.toshiba-ceramics.com/quartz.html , pages 1-2.
A36	,	Shin-Etsu Chemical Homepage, Semiconductor Materials Division, 5/17/99, http://www.shinetsu.co.jp/english/profile/division/sem-div/sem-div.html , pages 1-2.

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FORM PTO-1449 (MODIFIED)			ATTORNEY DOCKET NO. SP00-191	SERIAL NO. 10/048,138
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT			APPLICANT Davis et al.	
			FILING DATE 1/22/02	GROUP TO BE ASSIGNED TBA

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A37	/	Isimoto Co., Ltd., Products for Optics, 5/17/99, http://www.isimoto.ocm/isimoto/english/varyation3.html , pages 1-2.
A38	/	Isimoto Co., Ltd., Product Information, 5/17/99, http://www.isimoto.ocm/isimoto/english/procuct_info.html , pages 1-4.
A39	/	Isimoto Co., Ltd., Purity and Chemical Reactivity, 5/17/99, http://www.isimoto.ocm/isimoto/english/feature1.html , pages 1-3.
A40	/	The Optics Mall – Equipment/Supplies, Universal Photonics, Inc., 7/7/99, page 1.
A41	/	Rodel Authored Papers: A Study of the Variation of Physical Properties in Random Lots of Urethane Polishing Pads for CMP, 7/7/99, http://www.rodel.com/publications/paper1.asp , pages 1-4.
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A45	/	Optics and Photonics News, August 1999, Vol. 10, No. 8, August 1999, pages 34-38.
A46	/	Gianoulakis et al., <i>Thermal management of EUV lithography masks using low expansion glass substrates</i> , Proceedings of the SPIE – The International Society for Optical Engineering (1999), vol. 3676, pt. 1-2, p. 598-605.
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A48	/	S. T. Gulati and H.E. Hagy, <i>Journal of the American Ceramic Society</i> , Vol. 61, No. 5-6 May-June, 1978, Theory of the Narrow Sandwich Seal, pages 260-263.
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A50	/	S. F. Jacobs et al., Surface figure changes due to thermal cycling hysteresis, <i>Applied Optics</i> , Vol. 26, No. 20, October 15, 1987, pages 4438-4442
A51	/	C.W. Gwyn, R. Stulen, D. Sweeney and D. Attwood, <i>Extreme Ultraviolet Lithography</i> , pages 1-9 and 1-6.
A52	/	Richard H. Stulen and Donald W. Sweeney, <i>Extreme Ultraviolet Lithography</i> , IEEE Journal of Quantum Electronics, Vol. 35, No. 5, May 1999, pages 694-699
A53	/	William M. Tong, John S. Taylor, Stephen P. Vernon, <i>Substrates Requirements For Extreme Ultraviolet Lithography</i> , Lawrence Livermore National Laboratory.
A54	/	EUV Lithography NGL Technology Review, June 9, 1999.

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